WHAT IS CLAIMED IS:

1. A driving method for an electro-optical apparatus, comprising an electro-optical element disposed between two substrates and switching elements disposed, respectively, at a plurality of pixels arranged in a matrix manner corresponding to intersections of a plurality of scanning lines and a plurality of signal lines, and the electro-optical apparatus being adapted to write a data signal of positive polarity and a data signal of negative polarity to each pixel via the switching elements alternately on a frame-to-frame basis, including:

after having written any one of the data signal of positive polarity and the data signal of negative polarity in each frame, a non-data signal having a same polarity as the written data signal and of a maximum voltage value is written to the pixels; and

then after having written the non-data signal, a data signal having the opposite polarity from the data signal which is written in a previous frame is written to the pixels.

2. The driving method for an electro-optical apparatus according to Claim 1, the electro-optical element being liquid crystal, and a three-terminal switching element which is turned on when a scanning signal being supplied during each selection period that selects the plurality of scanning lines in sequence is employed as the switching element, and the data signal and the non-data signal supplied from the plurality of signal lines are written to the pixels in line sequence via the three-terminal switching element in the ON-state.

3. The driving method for an electro-optical apparatus, comprising an electro-optical element disposed between two substrates, and switching elements disposed, respectively, at a plurality of pixels arranged in a matrix manner corresponding to intersections between a plurality of scanning lines and a plurality of signal lines, and the electro-optical device being adapted to write a data signal of positive polarity and a data signal of negative polarity to each pixel via the switching elements alternately on a frame-to-frame basis in a pulse duration modulation system, including:

after having written any one of the data signal of positive polarity and the data signal of negative polarity in each frame, a non-data signal having a same polarity and a same voltage as the written data signal and of a maximum pulse duration value is written to the pixels; and

after having written the non-data signal, a data signal having opposite polarity from the data signal which is written in the previous frame is written to the pixels.

4. The driving method for an electro-optical apparatus according to Claim 3, the electro-optical element being a liquid crystal, a two-terminal switching element which is

turned on when a differential voltage between positive or negative scanning voltage supplied via the scanning line alternately on a frame-to-frame basis during each selection period for selecting the plurality of scanning lines in sequence and a signal voltage supplied via the signal line during the each selection period exceeds a threshold is employed as the switching element, and the data signal or the non-data signal, which is the differential voltage, being written to the pixels during the each selection period in line sequence.

5. The driving method for an electro-optical apparatus according to Claim 1, each frame being divided into a first sub field and a second sub field, and a data signal having the opposite polarity from the previous frame being written during the first sub field of the each frame, and the non-data signal being written during the second sub field of the each frame.

6. The driving method for an electro-optical apparatus according to Claim 5, the period of time for writing and retaining the non-data signal in the second sub field being shorter than the period of time for writing and retaining the data signal in the first sub field.

7. The driving method for an electro-optical apparatus according to Claim 1, one frame for writing the non-data signal being provided between two frames in which the data signals of the opposite polarity are written respectively.

8. The driving method for an electro-optical apparatus according to Claim 7, a period of time for writing the data signal in the one frame provided between the two frames being shorter than a period of time for writing the data signals respectively in the two frames.

9. An electro-optical apparatus, comprising:

an electro-optical element disposed between two substrates;

switching elements disposed, respectively, at a plurality of pixels arranged in a matrix manner corresponding to the intersections of a plurality of scanning lines and a plurality of signal lines;

the electro-optical apparatus being adapted to write a data signal of positive polarity and a data signal of negative polarity to each pixel via the switching elements alternately on a frame-to-frame basis, and further comprising:

a three-terminal switching element as the switching element, which is turned on when a scanning signal is supplied during each selection period for selecting the plurality of scanning lines in sequence;

a scanning line driving circuit and a signal line driving circuit that drive the plurality of scanning line and the plurality of signal line, respectively; and

a control circuit that controls the scanning line driving circuit and the signal line driving circuit in such a manner that after having written any one of the data signal

of positive polarity and the data signal of negative polarity in each frame, a non-data signal having the same polarity as the written data signal and of maximum voltage value is written to the pixels, and after having written the non-data signal, a data signal having the opposite polarity from the data signal written in a previous frame is written to the pixels are provided.

10. An electro-optical apparatus, comprising:

an electro-optical element disposed between two substrates;

switching elements disposed respectively at a plurality of pixels arranged in a matrix manner corresponding to the intersections of a plurality of scanning lines and a plurality of signal lines;

the electro-optical apparatus being adapted to write a data signal of positive polarity and a data signal of negative polarity to each pixel via the switching elements alternately on a frame-to-frame basis, and further comprising:

a two-terminal switching element as the switching element which is turned on when a data signal having a pulse duration according to a gray scale at a differential voltage between positive or negative scanning voltage supplied via the scanning line alternately on a frame-to-frame basis during each selection period for selecting the plurality of scanning lines in sequence and a signal voltage supplied via the signal line during the each selection period exceeds a threshold;

a scanning line driving circuit and a signal line driving circuit that drive the plurality of scanning lines and the signal lines, respectively, are provided, and in that after having written any one of the data signal of positive polarity and the data signal of negative polarity during the selection period of the each frame, the non-data signal having the same polarity as the written data signal and of a maximum pulse duration is written to the pixels, and the after having written the non-data signal, a data signal having the opposite polarity from the data signal written in a previous frame is written to the pixels.

11. The electro-optical apparatus according to Claim 9, each frame being divided into a first sub field and a second sub field, and a data signal having the opposite polarity from the previous frame is written during the first sub frame of the each frame, and the non-data signal is written during the second sub field of the each frame.

12. The electro-optical apparatus according to Claim 11, the period of time for writing and retaining the non-data signal in the second sub field being shorter than the period of time for writing and retaining the data signal in the first sub field.

13. Electronic equipment, comprising the electro-optical apparatus according to Claim 9.

14. The electro-optical apparatus according to Claim 10, each frame being divided into a first sub field and a second sub field, and a data signal having the opposite polarity from the previous frame is written during the first sub frame of the each frame, and the non-data signal is written during the second sub field of the each frame.

15. The electro-optical apparatus according to Claim 14, the period of time for writing and retaining the non-data signal in the second sub field being shorter than the period of time for writing and retaining the data signal in the first sub field.

16. Electronic equipment, comprising the electro-optical apparatus according to Claim 10.